

**PATENT APPLICATION**

**RESPONSE UNDER 37 CFR §1.116  
EXPEDITED PROCEDURE  
TECHNOLOGY CENTER 1772**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Andrés RIVERA et al.

Group Art Unit: 1772

Application No.: 09/353,592

Examiner: S. Hon

Filed: July 15, 1999

Docket No.: 101054

For: APPLICATOR FOR A POLYMERIZABLE MONOMER

**REQUEST FOR RECONSIDERATION AFTER FINAL REJECTION**

Director of the U.S. Patent and Trademark Office  
Washington, D.C. 20231

Sir:

In reply to the Office Action mailed June 4, 2001, applicants respectfully request reconsideration of the application in view of the following remarks.

Claims 1-30 are pending herein. By the Office Action, claims 1-30 are rejected under 35 U.S.C. §103(a). Applicants respectfully request reconsideration of these rejections.

Claims 1-14 and 16-30 are rejected under 35 U.S.C. §103(a) as having been obvious over Leung. Claim 15 is also rejected under 35 U.S.C. §103(a) as having been obvious over Leung. Because the rejections are similar, they will be addressed together. Applicants respectfully traverse these rejections.

Independent claim 1 is directed to an applicator for dispensing a polymerizable or cross-linkable material, comprising: an outer container; an inner container disposed within said outer container, said inner container containing a polymerizable or cross-linkable

material; and a rate modifier for said polymerizable or cross-linkable material disposed on an outer surface of said inner container. Independent claim 24 is directed to a method of making an applicator for dispensing a polymerizable or cross-linkable material, comprising sealing a polymerizable or cross-linkable material in an inner container; applying a rate modifier for the polymerizable or cross-linkable material to an outer surface of said inner container; and disposing the inner container within an outer container having dispensing means for dispensing the polymerizable or cross-linkable material from the applicator. Leung would not have rendered obvious the claimed invention, because Leung fails to teach or suggest each and every limitation of the claimed invention. In particular, Leung fails to teach or suggest at least the limitation that a rate modifier for the polymerizable or cross-linkable material is disposed on an outer surface of said inner container.

Similar to the claimed invention, Leung is directed to an applicator for dispensing a synthetic or semi-synthetic polymerizable or cross-linkable monomer material. According to Leung, the applicator comprises an applicator tip comprising a solid support having a polymerization or cross-linking accelerator or initiator for the synthetic or semi-synthetic monomer material disposed thereon or therein, and a container body. The synthetic or semi-synthetic monomer material is located in the container body in a non-contacting relationship with the tip prior to dispensing the material. See Leung at Abstract and claim 1. For example, an embodiment of the disclosed applicator is shown in Leung Figure 3. According to Figure 3, the applicator of Leung includes an outer container 200 and an inner container 400 that contains an amount of monomer material 300 therein. According to this embodiment, the applicator tip 500 has the polymerization or cross-linking accelerator or initiator for the monomer material disposed therein or thereon. See also Leung at column 7, line 66 to column 8, line 4.

Leung also discloses several modification of the disclosed applicator. For example, Leung discloses that the polymerization or cross-linking accelerator or initiator can be located in the applicator at a position other than being loaded in or on the applicator tip. For example, at column 10, lines 43-53, Leung teaches that the accelerator or initiator may be stored in a separate compartment within the outer container 200 separate form the polymerizable or cross-linkable monomer material. Alternatively, in the same passage, Leung discloses that "the applicator container may be lined or coated with the initiator ... for example, in the device of FIG. 3, the initiator may be coated on the internal surface of body 200."

Although Leung discloses these modifications of the disclosed applicator, Leung does not teach or suggest all of the limitations of the claimed invention. In particular, Leung at most discloses that the accelerator or initiator may be lined or coated on the internal surface of the outer container 200. However, this disclosure is entirely different from the limitation of independent claims 1 and 24 that the rate modifier for the polymerizable or cross-linkable material is disposed on an outer surface of the inner container. For example, with reference to Figure 1 of the present application, the rate modifier 50 according to the claimed invention is lined or coated on the outer surface of the inner container 40.

In order to have rendered obvious the claimed invention, the cited reference must teach or suggest each and every limitation of the claimed invention. See, for example, MPEP §2143, which specifies the requirements for a prima facie case of obviousness. However, in the present case, Leung fails to teach or suggest modifying the disclosed applicators so as to arrive at the claimed invention. Leung fails to teach or suggest an applicator, or a method of making an applicator, where a rate modifier for the polymerizable or cross-linkable material is applied to an outer surface of the inner container. Nowhere does Leung teach or suggest

this limitation, nor does Leung teach or suggest that a method of making the applicator could or should be modified so as to arrive at the claimed invention.

In response to these arguments, the Office Action argues that the phrase "lined or coated" in Leung must be given two separate and distinct meanings. The Office Action argues that one of ordinary skill in the art would understand the phrase to mean that the accelerator or initiator may be coated on the outer surface of the inner container or lined on an inner surface of the inner [sic, outer] container. See Office Action at page 3, first paragraph. Applicants respectfully disagree.

As used in Leung, the phrase "lined or coated" was not used, and would not be understood to mean, two alternative embodiments. Rather, the phrase merely used two interchangeable words to mean the same embodiment. "Coat" is defined as ". . . 3. A layer of material covering something else; coating." American Heritage Dictionary, Second College Edition, p. 285 (1991). Likewise, "line" is defined as "line<sup>2</sup> . . . to fit a covering to the inside surface of . . . to cover the inner surface of." American Heritage Dictionary, Second College Edition, p. 733 (1991). (Copies of the dictionary definitions are enclosed for the Examiner's convenience.) Thus, both words refer to a layer or covering applied to another surface, i.e., the inner surface of the outer container. However, as used in Leung, the words are used in conjunction with reference to the outer container, specifying "the applicator container may be lined or coated with the initiator" (emphasis added). Nowhere does Leung use the phrase "lined or coated" with respect to the inner container, or even imply that one of "lined" or "coated" was used with respect to the inner container. Thus, one of ordinary skill in the art would readily understand that both words referred to placing the initiator in the inner surface of the outer container, and not to placing the initiator on the outer surface of the inner container, as claimed.

It is clear that the only motivation for modifying Leung to arrive at the claimed invention, or for interpreting the disclosure of Leung as asserted in the Office Action, derives only from the instant application. One of ordinary skill in the art would not have interpreted the recited phrase of Leung to have rendered obvious the claimed invention in the absence of the present disclosure. However, this is improper. The reason, suggestion or motivation for modifying a references "can not come from the applicant's invention itself." In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). That is, the motivation for modifying the embodiments of Leung can not be a product of hindsight reconstruction of the claimed invention based on applicant's own disclosure.

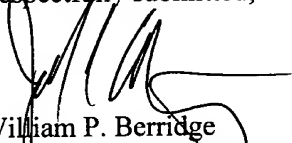
Leung does not teach or suggest the instant claim limitation of applying a rate modifier for the polymerizable or cross-linkable material to an outer surface of the inner container. Although Leung discloses various embodiments of an applicator for applying a monomer material, those embodiments are different from and would not have rendered obvious the claimed invention. In the disclosed applicator of Leung, the accelerator or initiator for the monomer material is described as being loaded in or on an applicator tip, or being coated on an inner surface of the outer container of the applicator. However, Leung fails to teach or suggest applying the rate modifier (initiator or accelerator) to an outer surface of the inner container.

Accordingly, Leung fails to teach or suggest each and every limitation of the claimed invention. The claimed invention would thus not have been obvious over the disclosure of Leung. Reconsideration and withdrawal of the rejections are respectfully requested.

In view of the foregoing remarks, Applicants respectfully submit that the application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned Attorney at the telephone number listed below.

Respectfully submitted,



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WPB:JSA

Attachment:

American Heritage Dictionary, Second College Edition, pp., 285, 733 (1991)

Date: August 28, 2001

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telegraph system. b. An open or functioning telephone connection. 16. a. A passenger or cargo system of transportation, usually over a definite route. b. A company owning or managing such a system. 17. A railway track or system of tracks. 18. A course of progress or movement; route; the way of flight. 19. A general method, manner, or course of procedure; different lines of thought. 20. An official or prescribed policy; the party line. 21. A condition of agreement; alignment; brought the front wheels into line. 22. a. One's trade, occupation, or field of interest. b. The range of one's competence; out of my line. 23. Archaic. One's lot or position in life. 24. Merchandise or services of a similar or related nature; carries a complete line of small tools. 25. A group of persons or things arranged in a row or series. 26. a. A chronological series of persons or things who succeed each other: a line of kings. b. Ancestry or lineage. c. A strain, as of livestock or plants, developed by selective breeding. 27. a. A sequence of related things that leads to a certain ending: a line of argument. b. An ordered system of operations that allows a sequential manufacture or assembly of goods at all or various stages of production. 28. a. A horizontal row of printed or written words or symbols. b. A unit of verse made up of a certain number of metrical feet characteristic of the verse. 29. A brief letter; note. 30. Often lines. The dialogue of a play or other theatrical presentation. 31. A calculated or glib way of speaking, usually to obtain an undecoded end. 32. lines. Chiefly Brit. Informal. A marriage certificate. 33. In bridge, a horizontal demarcation dividing categories of points scored. 34. a. A source of information. b. The information itself. 35. Mus. One of the five parallel marks composing a staff. 36. a. A military formation in which elements, such as troops, tanks, or ships, are arranged abreast of each other. b. The battle area closest to the enemy. c. The troops in this area. d. Combat troops. e. The officers in direct command of warships. 37. A bulwark or trench. 38. An extended system of such fortifications or defenses. 39. Sports. a. A foul line. b. A real or imaginary mark demarcating a specified section of a playing area or field. c. A real or imaginary mark or point at which a race begins or ends. 40. Football. a. A line of scrimmage. b. The linemen. —v. lined, lining, lines. —tr. 1. To mark or incise with a line or lines. 2. To represent with lines. 3. To place in a series or row. 4. To form a bordering line along: small stalls lined the alley. 5. Baseball. To hit (a ball) sharply in usually a straight line. —intr. Baseball. To hit a line drive: lined out to shortstop. —phrasal verb. line up. 1. To arrange in a line; align. 2. To organize and make ready: lined up considerable support for the bill. —idioms. between the lines. By inference, in an indirect manner. down the line. 1. All the way, completely. 2. At a point or end in the future. In line for. Next in order for: in line for the presidency. on the line. Informal. 1. Ready or available for immediate payment. 2. In jeopardy; so as to be risked: put his reputation on the line. out of line. Uncalled-for; improper; unruly. [ME < OE, cord, and OFr. ligne, line, both < Lat. linea, string < known, thread.]

line<sup>2</sup> (lin) *n.* 1. To fit a covering to the inside surface of: a coat lined with fur. 2. To cover the inner surface of: Moisture lined the cave's walls. 3. To fill plentifully, as with money or food. [ME *linen* < line, flax < OE *lin* < Lat. *linum*.]

lineage<sup>1</sup> (lin'e-j) *n.* 1. A direct descent from a particular ancestor; ancestry. b. Derivation. 2. The descendants of a common ancestor considered to be the founder of the line. [ME < OFr. *lignage* < ligne, line. —see LINE<sup>1</sup>.]

lineage<sup>2</sup> (lin'e-j) *n.* Variant of lineage.

lineal (lin'e-əl) *adj.* 1. Belonging to or being in the direct line of descent from an ancestor. 2. Derived from or relating to a particular line of descent. 3. Linear. [ME < AN *lineale* < Med. Lat. *linealis* < Llat. < Lat. *linea*, line < *linum*, thread.] —lin'e-ally *adv.*

lineament (lin'e-mənt) *n.* 1. A distinctive shape, contour, or line, esp. of the face. 2. Often lineaments. A definitive or characteristic feature. [ME *linament* < Lat. *lineamentum* < linea, line < *linum*, thread.]

linear (lin'e-ər) *adj.* 1. Of, relating to, or resembling a line; straight. 2. In, of, describing, described by, or related to a straight line. b. Having only one dimension. 3. Characterized by, composed of, or emphasizing drawn lines rather than painterly effects. 4. Bot. Narrow and elongated: a linear leaf. [Lat. *linearis* < linea, line < *linum*, thread.] —lin'e-ly *adv.*

linear A *n.* An undeciphered writing system used on Crete from the 18th to the 15th century B.C.

linear accelerator *n.* An electron, proton, or heavy-ion accelerator in which the paths of the particles accelerated are essentially straight lines rather than circles or spirals.

linear algebra *n.* 1. A branch of mathematics dealing with the theory of systems of linear equations, matrices, vector spaces, determinants, and linear transformations. 2. A mathematical ring and vector space with scalars from an associated field, the multiplication of which is of the form  $(ab)(cd) = (ab)(cd)$ , where  $a$  and  $b$  are scalars and  $A$  and  $B$  are vectors.

linear alky-l-ate sulfonate (Al'ka-lit') *n.* A biodegradable

surfactant that is used in detergents and is a salt of sulfonic acid.

Linear B *n.* A syllabic script used in Mycenaean Greek documents of Crete and Pylos from the 14th to the 13th century B.C.

linear combination *n.* A mathematical expression of first order, composed of the sums and differences of elements with non-zero coefficients.

linear dependence *n.* The property of a mathematical set, with its coefficients taken from another, of having at least one linear combination equal to zero when at least one of the coefficients is not equal to zero.

linear equation *n.* An algebraic equation, such as  $x + y + z = 0$ , in which the highest degree term in the variable or variables is of the first degree.

linear independence *n.* The property of a mathematical set, with its coefficients taken from another, of having no linear combinations equal to zero unless all of the coefficients are equal to zero.

line-arlize (lin'e-ə-līz) *v.* *trans.* *line-arlize, -arlizes.* To put or project in linear form. —line-arlization *n.*

linear measure *n.* 1. Measurement of length. 2. A unit or system of units for measuring length.

linear momentum *n.* Momentum (sense 1).

linear perspective *n.* A form of perspective in drawing or painting in which parallel lines are represented as converging so as to give the illusion of depth and distance.

line-ation (lin'e-ə-shən) *n.* 1. The action of marking or outlining with lines. 2. An outline. 3. An arrangement of lines.

line-back-er (lin'bak-ər) *n.* Football. Any of the defensive players forming a second line of defense behind the ends and tackles. —line-backing *n.*

line breeding *n.* Selective breeding to perpetuate certain qualities or characteristics in a strain of livestock.

line cut *n.* A letterpress printing plate made from a line drawing by a photoengraving process.

line drawing *n.* A drawing made with lines only, esp. one used as copy for a line cut.

line drive *n.* Baseball. A batted ball hit sharply so that its path roughly describes a straight line.

line engraving *n.* 1. A metal plate, used in intaglio printing, on the surface of which design lines have been hand engraved. 2. The process of making such an engraving. 3. A print made from such an engraving. 4. A line cut.

line-man (lin'mən) *n.* 1. One employed to install or repair telephone, telegraph, or electric power lines. 2. One employed to inspect and repair railroad tracks. 3. Football. A player positioned on the forward line.

lin-en (lin'en) *n.* 1. A thread made from fibers of the flax plant. b. Cloth woven from this thread. 2. Garments or articles made from linen or similar material. 3. Paper made from flax fibers, or given a linenlike luster. —adj. 1. Made of flax or linen. 2. Resembling linen. [ME < linen, of cloth < OE *linen* < Lat. *linum*, thread.]

line of credit *n.* A credit line (sense 2).

line of force *n.* A theoretical line in a field of force, any tangent to which gives the direction of the field at the point of tangency.

line of scrimmage *n.* Football. An imaginary line across the field on which the ball rests and at which the teams line up for a new play.

line of sight *n.* 1. An imaginary line from the eye to the object being looked at. 2. An unobstructed path between electronic sending and receiving antennas.

lin'e-o-late (lin'e-ə-lāt) *adj.* Marked with fine lines. [NLat. *lineolatus* < Lat. *lineola*, little line, dim. of *linea*, line < *linum*, thread.]

line printer *n.* A high-speed printing device, primarily used in data processing, that prints an entire line of type as a unit rather than printing each character individually.

lin'er<sup>1</sup> (lī'nər) *n.* 1. One that draws or makes lines. 2. A commercial ship or airplane, esp. one carrying passengers on a regular route. 3. Baseball. A line drive.

lin'er<sup>2</sup> (lī'nər) *n.* 1. One who makes or puts in linings. 2. Something used as a lining.

line score *n.* Sports. A summary of the scoring by period in a game printed in the form of a horizontal table, esp. an inning-by-inning record of the runs scored in a baseball game plus the total of each team's hits, runs, and errors.

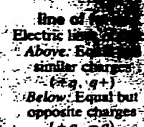
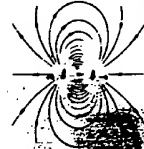
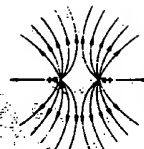
lines-man (lin'z-mən) *n.* 1. A football. An official who marks the downs and the position of the ball and watches for certain violations from the sidelines. b. Sports. An official in various court games whose chief duty is to call shots that fall out of bounds. 2. A lineman (sense 1).

line spectrum *n.* A spectrum consisting of a set of discrete, fairly narrow lines.

line squall *n.* Naut. A squall or squalls occurring along a narrow band of thunderstorms.

line storm *n.* A violent storm or series of storms of rain and wind popularly supposed to take place during the equinoxes.

line-up also line-up (lin'up) *n.* 1. A line of persons formed for inspection or identification. 2. a. The members of a team chosen to start a game. b. A list of such players. 3. A group of persons, organizations, or things enlisted or arrayed for a specific purpose.



Line of Electric Lines  
Above: Equal but similar charges (+q, +q)  
Below: Equal but opposite charges (+q, -q)

lin' / s sauce / sh ship, dish / t tight / th thin, path / th this, bath / ū cut / ū urge / v valve / w with / y yes / z zebra, size / z / z about, item, edible, gallop, circus / α Fr. fen, Ger. schön / ō Fr. ū, Ger. über / x Ger. ich, Scot. loch / y Fr. bon.